

FIGURE 1A

ABCA6 nucleotide sequence

Sequence range: 1 to 5332

TACACCCCTTTTCAGAAACCAGGCTGTGTAAGAGCTGCTGGAGTAGGCACCCATTTAAAGAAAA
AATGAAGAAGCAGCAATAAAGAAGTTGTAATCGTTACCTAGACAAACAGAGAACTGGTTTTGAC
AGTGTCTTAGAGTGCTTTTTATTATTTTCCTGACAGTTGTGTTCCACCATGATTACTTTCTCC
TTCAGCGAATAGGCTAAATGAATATGAAACAGAAAAGCGTGTATCAGCAAACCAAAGCACTTCT
GTGCAAGAATTTTCTTAAGAAATGGAGGATGAAAAGAGAGAGCTTATTGGAATGGGGCCTCTCA
ATACTTCTAGGACTGTGTATTGCTCTGTTTTCCAGTTCCATGAGAAATGTCCAGTTTCTTGGA
TGGCTCCTCAGAATCTGGGAAGGGTAGATAAATTTAATAGCTCTTCTTTAATGGTTGTGTATAC
ACCAATATCTAATTTAACCAGCAGATAATGAATAAACAGCACTTGCTCCTCTTTTGAAAGGA
ACAAGTGTCATTGGGGCACCAATAAACACACATGGACGAAATACTTCTGGAAAATTTACCAT
ATGCTATGGGAATCATCTTTAATGAACTTTCTCTTATAAGTTAATATTTTTCCAGGGATATAA
CAGTCCACTTTTGAAAGAAGATTTCTCAGCTCATTGCTGGGATGGATATGGTGAGTTTTTCATGT
ACATTGACCAAATACTGGAATAGAGGATTTGTGGCTTTACAAACAGCTATTAATACTGCCATTA
TAGAAATCACAACCAATCACCTGTGATGGAGGAGTTGATGTCAGTTACTGCTATAACTATGAA
GACATTACCTTTTATAACTAAAATCTTCTTCAATGAGATGTTTATTTTATTCTTCTTGCTT
CATTTCTCCCCACTTGATATATTTTATATCACTCAATGTAACAAAAGAGAGAAAAAAGTCTAAGA
ATTTGATGAAAATGATGGGTCTCCAAGATTCAGCATTCTGGCTCTCCTGGGGTCTAATCTATGC
TGGCTTCATCTTTATTATTTCCATATTCATTACAATTATCATAACATTCACCCAAATTATAGTC
ATGACTGGCTTCATGGTCATATTTATACTCTTTTTTTTATATGGCTTATCTTTGGTAGCTTTGG
TGTTCTCTGATGAGTGTGCTGTTAAAGAAAGCTGTCTCACCAATTTGGTTGTGTTTCTCCTTAC
CCTCTTTTGGGGATGTCTGGGATTCAGTGTATTTTATGAACACCTTCCTTCATCTCTGGAGTGG
ATTTTGAATATTTGTAGCCCTTTTGCCTTTACTACTGGAATGATTCAGATTATCAAACCTGGATT
ATAACTTGAATGGTGTAAATTTTTCCTGACCCTTCAGGAGACTCATATACAATGATAGCAACTTT
CTCTATGTTGCTTTTGGATGGTCTCATCTACTTGCTATTGGCATTATACTTTGACAAAATTTTA
CCCTATGGAGATGAGCGCCATTATTCTCCTTTATTTTCTTGAATTCATCATCTTGTTTCCAAC
ACCAAAGGACTAATGCTAAGGTTATTGAGAAAGAAATCGATGCTGAGCATCCCTCTGATGATTA
TTTTGAACCAGTAGCTCCTGAATTCCAAGGAAAAGAAGCCATCAGAATCAGAAATGTTAAGAAG
GAATATAAAGGAAAATCTGGAAAAGTGGAAAGCATTGAAAGGCTTGCTCTTTGACATATATGAAG
GTCAAATCACGGCAATCCTGGGTACAGTGGAGCTGGCAAATCTTCACTGCTAAATATTCTTAA
TGGATTGTCTGTTCCAACAGAAGGATCAGTTACCATCTATAATAAAAATCTCTCTGAAATGCAA
GACTTGGAGGAAATCAGAAAGATAACTGGCGTCTGTCTCAATTCAATGTTCAATTTGACATAC
TCACCGTGAAGGAAAACCTCAGCCTGTTTGCTAAAATAAAAGGGATTTCATCTAAAGGAAGTGGA
ACAAGAGGTACAACGAATATTATTGGAATTGGACATGCAAAACATTCAAGATAACCTTGCTAAA
CATTTAAGTGAAGGACAGAAAAGAAAGCTGACTTTTGGGATTACCATTTTAGGAGATCCTCAA
TTTTGCTTTTAGATGAACCAACTACTGGATTGGATCCCTTTTCCAGAGATCAAGTGTGGAGCCT
CCTGAGAGAGCGTAGAGCAGATCATGTGATCCTTTTCAGTACCCAGTCCATGGATGAGGCTGAC
ATCCTGGCTGATAGAAAAGTGATCATGTCCAATGGGAGACTGAAGTGTGCAGGTTCTTCTATGT
TTTTGAAAAGAAGGTGGGGTCTTGATATCACCTAAGTTTACATAGGAATGAAATATGTAACCC
AGAACAAATAACATCCTTCATTACTCATCACATCCCCGATGCTAAATTAACAAACAGAAAACAAA
GAAAAGCTTGATATACTTTGCCACTGGGAAGGACAAATACATTTCCAGATCTTTTCAGTGATC
TGGATAAGTGTTCTGACCAGGGAGTGACAGGTTATGACATTTCCATGTCAACTCTAAATGAAGT

FIGURE 1B

CTTTATGAAACTGGAAGGACAGTCAACTATCGAACAAGATTTTGAACAAGTGGAGATGATAAGA.
GACTCAGAAAGCCTCAATGAAATGGAGCTGGCTCACTCTTCCTTCTCTGAAATGCAGACAGCTG
TGAGTGACATGGGCCTCTGGAGAATGCAAGTCTTTGCCATGGCACGGCTCCGTTTCTTAAAGTT
AAAACGTCAAACATAAGTGTTATTGACCCTATTATTGGTATTTGGAATCGCAATATTCCTTTG
ATTGTTGAAAATATAATATATGCTATGTAAATGAAAAGATCGATTGGGAATTTAAAAACGAAT
TGTATTTTCTCTCTCCTGGACAACCTCCCCAGGAACCCCGTACCAGCCTGTTGATCATCAATAA
CACAGAATCAAATATTGAAGATTTTATAAAATCACTGAAGCATCAAATATACTTTTGGAGTA
GATGACTTTGAAAACAGAAATGGTACTGATGGCCTCTCATACAATGGAGCTATCATAGTTTCTG
GTAAACAAAAGGATTATAGATTTTTCAGTTGTGTGTAATACCAAGAGATTGCACTGTTTTCCAAT
TCTTATGAATATTATCAGCAATGGGCTACTTCAAATGTTTAATCACACACAACATATTCGAATT
GAGTCAAGCCCATTTCTCTTAGCCACATAGGACTCTGGACTGGGTGGCCGATGGTTCTCTTT
TCTTATTTTTTGGTTCTATGTAGCATTCTCTCTTATATCACCATGGGCAGCATCAGTGATTACAA
GAAAAATGCTAAGTCCCAGCTATGGATTTTCAAGCCTCTACACTTCTGCTTACTGGTGTGGGCAG
GCACTAGTGGACGTCAGCTTCTTCATTTTAATTCTCCTTTTAATGTATTTAATTTTCTACATAG
AAAACATGCAGTACCTTCTTATTACAAGCCAAATTGTGTTTGCTTTGGTTATAGTTACTCCTGG
TTATGCAGCTTCTCTTGTCTTCTTCATATATATGATATCATTTATTTTTCGCAAAAGGAGAAAA
AACAGTGGCCTTTGGTCATTTTACTTCTTTTTTGCCCTCCACCATCATGTTTTCCATCACTTTAA
TCAATCATTTTGGACCTAAGTATATTGATTACCACCATGGTATTGGTTCCTTCATATACCTTGCT
TGGATTTAAACTTTTTTGGAGTGAGAGACCAGGAGCACTACAGAGAATTTCCAGAGGCAAAAT
TTTGAATTGAGTGCCACTGATTTTCTAGTCTGCTTCATACCCTACTTTTCAAGCTTTGCTATTCTG
TTTTTGTCTAAGATGCATGGAACATAAATGTGGAAAGAAAAGAATGCGAAAAGATCCTGTTTT
CAGAATTTCCCCCAAAGTAGAGATGCTAAGCCAAATCCAGAAGAACCATAGATGAAGATGAA
GATATTCAAACAGAAAGAAATAAGAACAGCCACTGCTCTGACCACTTCAATCTTAGATGAGAAAC
CTGTTATAATTGCCAGCTGTCTACACAAAGAATATGCAGGCCAGAAGAAAAGTTGCTTTTCAA
GAGGAAGAAGAAAATAGCAGCAAGAAATATCTCTTTCTGTGTTCAAGAAGGTGAAATTTTGGGA
TTGCTAGGACCCAGTGGTGCTGGAAAAAGTTCATCTATTAGAATGATATCTGGGATCACAAAGC
CAACTGCTGGAGAGGTGGAACGAAAGGCTGCAGTTCAGTTTGGGCCACCTGGGGTACTGCCC
TCAAGAGAACGTGCTGTGGCCCATGCTGACGTTGAGGGAACACCTGGAGGTGTATGCTGCCGTC
AAGGGGCTCAGGAAGCGGACGCGAGGCTCGCCATCGCAAGATTAGTGAGTGCTTTCAAACCTGC
ATGAGCAGCTGAATGTTCTGTGCAGAAATTAACAGCAGGAATCACGAGAAAGTTGTGTTTTGT
GCTGAGCCTCCTGGGAAACTCACCTGTCTTGCTCCTGGATGAACCATCTACGGGCATAGACCCC
ACAGGGCAGCAGCAAATGTGGCAGGCAATCCAGGCAGTCGTTAAAAACACAGAGAGAGGTGTCC
TCCTGACCACCCATAACCTGGCTGAGGCGGAAGCCTTGTTGTGACCGTGTGGCCATCATGGTGTC
TGGAAGGCTTAGATGCATTGGCTCCATCCAACACCTGAAAAACAGACTTGGCAAGGATTACATT
CTAGAGCTAAAAGTGAAGGAAACGTCTCAAGTGACTTTGGTCCACACTGAGATTCTGAAGCTTT
TCCCACAGGCTGCAGGGCAGGAAAGGTATTCTCTTTGTTAACCTATAAGCTGCCCGTGGCAGA
CGTTTACCCTCTATCACAGACCTTTCACAAATTAGAAGCAGTGAAGCATAACTTTAACCTGGAA
GAATACAGCCTTTCTCAGTGCACACTGGAGAAGGTATTCTTAGAGCTTTCTAAAGAACAGGAAG
TAGGAAATTTTGATGAAGAAATTGATACAACAATGAGATGGAAACTCCTCCCTCATTGAGATGA
ACCTTAAACCTCAAACCTAGTAATTTTTTGTGATCTCCTATAAACTTATGTTTTATGTAATA
ATTAATAGTATGTTAATTTTAAAGATCATTTAAAATTAACATCAGGTATATTTTGTAAATTTA
GTTAACAAATACATAAATTTTAAATTTTCTCCTCTCAAACATAGGGGTGATAGCAAACCTG
TGATAAAGGCAATACAAAATATTAGTAAAGTCACCCAAAGAGTCAGGCACTGGGTATTGTGGAA
ATAAACTATATAAACTTAA

FIGURE 2

ABCA6 peptide sequence

Sequence range: 1 to 1617

MNMKQKSVYQQTKALLCKNFLKKWRMKRESLLEWGLSILLGLCIALFSSSMRNVQFPGMAPQNL
GRVDKFNSSSLMVVYTPISNLTQQIMNKTALAPLLKGTSVIGAPNKTHMDEILLENLPYAMGII
FNETFSYKLIFFQGYNSPLWKEDFSAHCWDGYGEFSCLTLYWNRGFVALQTAINTAIIEITTN
HPVMEELMSVTAITMKTLPFITKNLLHNEMFILFFLLHFSPLVYFISLNVTKERKSKNLMKMM
GLQDSAFWLSWGLIYAGFIFIISIFITIIITFTQIIIVMTGFMVIFILFFLYGLSLVALVFLMSV
LLKKAVLTNLVVFLLTFLWGCLGFTVFYEHLPSSLEWILNICSPPFAFTTGMIIKLDYNLNGV
IFPDPSGDSYTMIAFTSMALLDGLIYLLALYFDKILPYGDERHYSPLFFLNSSSCFQHQRNTA
KVIEKEIDAEHPSDDYFEPVAPEFQGKEAIRIRNVKKEYKGKSGKVEALKGLLFDIYEGQITAI
LGHSGAGKSSLLNINLGLSVPTGSGVTIYNKNLSEMQLDLEIRKITGVCPQFNVQFDILTVKEN
LSLFAKIKGIHLKEVEQEVQRILLELDMQNIQDNLAHLSEGQKRKLTFGITILGDPQIILLDE
PTTGLDPFSRDQVWSLLRERRADHVILFSTQSMDEADILADRKVIMSNRGLKACGSSMFLKRRW
GLGYHLSLHRNEICNPEQITSFITHHIPDAKLKTENKEKLVTPLPLGRNTNFPDLFSDLDKCS
QGVTDYDISMSTLNEVFMKLEGQSTIEQDFEQVEMIRDSESLNEMELAHSSSFSEMQTAVSDMGL
WRMQVFAMARLRFLKLKRQTKVLLTLLLVFGIAIFPLIVENIIYAMLNEKIDWEFKNELYFLSP
GQLPQEPRTSLLIINNTESNIEDFIKSLKHQNILLEVDDFENRNGTDGLSYNGAIIIVSGKQKDY
RFSVVCNTRKRLHCFPILMNIISNGLLQMFNHTQHRIESSPFPLSHIGLWTGLPDGSFFLFLVL
CSISPYITMGSIISDYKKNKAKSQLWISGLYTSAYWCGQALVDVSFFILILLMYLIIFYIENMQYL
LITSQIVFALVIVTPGYAASLVFFIYMISFIFRKRKNSGLWSFYFFFASTIMFSITLINHFDL
SILITTMVLVPSYTLLGFKTFLEVRDQEHYREFPEANFELSATDFLVCFIPYFQTLLFVFLRC
MELKCGKKRMRKDPVFRISPQSRDAKPNPEPIDEDEDIQTERIRTATALTTSILDEKPVIIAS
CLHKEYAGQKKSCFSKRKKKIAARNISFCVQEGEILGLLGPSGAGKSSSIRMISGITKPTAGEV
ELKGCSSVLGHLGYCPQENVLWPMPLTLREHLEVYAAVKGLRKADARLAIARLVSAFKLHEQLNV
PVQKLTAGITRKLCFVLSLLGNPVLLLDEPSTGIDPTGQQQMWQAIQAVVKNTERGVLTTN
LAEAEALCDRVAIMVSGRLRCIGSIQHLKNRLGKDYILELKVKETSQVTLVHTEILKLFPQAAG
QERYSSLLTYKLPVADVPLSQTFHKLEAVKHNFNLEEYSLSQCTLEKVFEELSKEQEVGNFDE
EIDTTMRWKLLPHSDEP